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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,743	12/09/2003	Stephen H. Li	TI-36014	5121

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TEXAS INSTRUMENTS INCORPORATED
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EXAMINER

HUYNH, KIM T

ART UNIT	PAPER NUMBER
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2111

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/28/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No. 10/731,743	Applicant(s) LI ET AL.	
	Examiner Kim T. Huynh	Art Unit 2112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 October 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12 and 15-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12 and 15-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Receipt Acknowledgement

1. Receipt is acknowledged of the request filed on 11th of October 2006 for a request for continued examination (RCE) under 37 CFR 1.114 based on the application No. 10/731,743, which the request is acceptable and an RCE has been established. Currently, claims 12, 15-21 are pending in this application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 12, 15-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Kelly et al. (US Patent 6,760,793)

As per claim 12, Kelly discloses an arbitration circuit for an output port, comprising:

- a FIFO queue(fig.8, 831 ie input buffer) containing a head pointer (col.4, lines 50-67) and a plurality of characterizing data for each packet received at an input port(col.8, lines 40-65), data portion of the packet being stored in a common memory (col.9, lines 35-64, col.4, lines 50-65 ie output buffer

also common memory which included the selected packets which included data portion and head pointer for each transaction)the queue forming a look-up table to determine which data will be sent out from the output port; (col.9, lines 1-21)

- a plurality of arbitration circuits coupled to the look-up table for selecting the next packet to be sent out corresponding to a preselected characterizing datum (col.9, lines 1-48 ie arbiter selects packets via switch to output buffer sets wherein buffer sets implies table) wherein the head pointer of the selected packet is utilized to select the packet from a common memory for the plurality of arbitration circuits. [(col.4, lines 50-65, ie a packet contain information transferring which allows differentiation of transactions from different devices) , (col.9, lines 35-48.), (col.10, lines 27-49, ie table 104 provided by the three buffer sets which provide transaction ordering)]

As per claim 15, Kelly discloses wherein the arbitration circuit is the arbitration circuit for one port of a PCI Express(revision 1.0a) switch (fig.8, 801). (col.9, lines 1-48)

As per claim 16, Kelly discloses wherein the common memory is shared by all ports in the PCI Express switch. (col.9,lines 1-48 ie I/O interconnect)

As per claim 17, Kelly discloses wherein the common memory is a crossbar memory. (col.9, lines 1-48 ie x-bar switch)

As per claim 18, Kelly discloses wherein the crossbar memory is a common port, virtual channel or type memory. (col.9, lines 35-48 ie virtual channel)

As per claim 19, Kelly discloses wherein the PCI Express(revision 1.0a) switch (fig.8, 801 ie switch) comprises:

- a plurality of ports; (fig.8, 863 ie I/O interconnect)
- a plurality of port controllers(fig.8, 859 ie interfaces), each controller being coupled to one of the ports;
- a local bus(fig.3, 311 ie internal bus) coupling the port controllers to a controller subsystem; and (col.4, lines 29-49)
- a single crossbar memory (fig.8, 833 ie x-bar switch) coupled to each of the port controllers and the controller subsystem, the crossbar memory serving as a common port or virtual channel memory for each of the port controllers. (col.9, lines 1-48)

As per claim 20, Kelly discloses wherein the crossbar memory is a common port, virtual channel or type memory. (col.9, lines 35-48 ie virtual channel)

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As per claim 21, Kelly discloses wherein the crossbar memory is used as the replay memory by storing the head pointer in the port controller.(col.9, lines 1-48)

Response to Amendment

4. Applicant's amendment filed on 10/11/06 have been fully considered but does not place the application in condition for allowance.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., each port has its own memory for storing the packets of data that will be input to or output from the port where as the present invention the FIFO queue contains only the head pointers and characterizing data and not the actual data itself.) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Stewart et al. [Pub. No. US2005/0105516] discloses the switch routes data units using memory-mapped I/O. The address portions to be associated with end points via an arbitrage assignment process.

6. *Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kim Huynh whose telephone number is (571)272-3635 or via e-mail addressed to*


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[kim.huynh3@uspto.gov]. The examiner can normally be reached on M-F 9:00AM- 6:00PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Rinehart can be reached at (571)272-3632 or via e-mail addressed to [mark.rinehart@uspto.gov].

The fax phone numbers for the organization where this application or proceeding is assigned are (571)273-8300 for regular communications and After Final communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571)272-2100.

Kim Huynh

December 19, 2006

A handwritten signature in black ink, consisting of several overlapping loops and a long horizontal stroke at the bottom.

**MARK H. RINEHART
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100**